

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing of claims in the application.

1. (currently amended) An apparatus for providing a micro-optic function within an optical system comprising:

a focal plane array (FPA) having a detector surface, wherein input radiation from a viewed scene is received by the optical system; and,

a substrate with a front side and a back side, said back side further including at least one microlens attached thereto to place said microlens between said FPA and said substrate, said substrate being positioned spaced-apart from and approximate to the focal plane within said optical system, wherein said microlens re-focuses said radiation and re-directs said radiation onto said detector surface.

2. (original) The apparatus of claim 1 wherein said microlens is a diffractive lens structure.

3. (original) The apparatus of claim 1 wherein said microlens is a refractive lens structure.

4. (amended) A micro-optic technique for a substrate within an optical system having a focal plane array (FPA) detector surface, comprising the steps of:

receiving incident radiation from a viewed scene through an optical assembly;

providing a substrate having a front side and a back side on the optical axis in proximity to, but spaced-apart from, the focal plane within said optical assembly;

attaching at least one micro-optic on the substrate to said back side to place said microlens between said FPA and said substrate; and,

5. (original) The micro-optic technique of claim 4 wherein said micro-optic effect is an improved detector fill factor.
6. (previously added) The apparatus as recited in claim 1 wherein said focal plane array further comprises at least one optical detector, each said optical detector corresponding to a respective microlens.